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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,711	10/29/2003	Cechan Tian	064731.0378	5574
5073	7590	11/19/2007		
BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980			EXAMINER BELLO, AGUSTIN	
			ART UNIT 2613	PAPER NUMBER
			NOTIFICATION DATE 11/19/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/695,711	TIAN ET AL.	
	Examiner	Art Unit	
	Agustin Bello	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/31/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5-10, 12-14, 16-18, and 20-46 are rejected under 35 U.S.C. 102(e) as being anticipated by Way (U.S. Patent Application Publication No. 2003/0025961).

Regarding claim 1, 9, 12, 13, 16, 23, 30, 32, and 33, Way teaches an optical ring operable to communicate optical traffic (reference numeral 12 in Figure 6); a plurality of nodes (reference numeral 24, 26 in Figure 6) coupled to the optical ring, each node operable to passively add and drop one or more traffic streams to and from the optical ring, each traffic stream comprising at least one channel; and the plurality of nodes comprising: a hub node (reference numeral 24 in Figure 6) operable to selectively pass or terminate a plurality of individual sub-bands of the optical traffic; and a plurality of sub-band nodes (reference numeral 26 in Figure 6) each operable to terminate a respective sub-band of the optical traffic.

Regarding claims 2, 17, 24, Way teaches that the plurality of nodes further comprises a coupler node (i.e. any one of nodes 26 or the bottom-most node in Figure 6) operable to drop and continue optical traffic passing through the coupler node.

Regarding claims 3, 10, 14, 18, 25, 31, 34, 38, 44, Way teaches that the hub node comprises: a demultiplexer (i.e. "Three-color Splitters" of Figure 13) operable to demultiplex

Art Unit: 2613

the optical traffic into its constituent sub-bands; a plurality of switches (i.e. the “1x1” switches of Figure 13) each operable to pass or terminate a respective sub-band; and a multiplexer (i.e. “Fiber Coupler” of Figure 13) operable to multiplex each sub-band passed at the plurality of switches for communication on the optical ring.

Regarding claims 5, 20, 26, Way teaches that the plurality of sub-band nodes each comprise a sub-band filter operable to block optical traffic in a respective sub-band (paragraph [0087]).

Regarding claims 6, 21, 27, Way teaches a combination sub-band node (Figure 20C) operable to terminate a plurality of sub-bands of the optical traffic.

Regarding claims 7, 22, 28, Way teaches that the combination sub-node comprises a plurality of cascaded sub-band filters (reference numeral 154 in Figure 20C) each operable to block optical traffic in a respective sub-band.

Regarding claims 8, 29, Way teaches an optical ring operable to communicate optical traffic (reference numeral 12 in Figure 6); a plurality of nodes coupled to the optical ring (reference numeral 24, 26 in Figure 6), each node comprising at least one transport element operable to passively add and drop one or more traffic streams to and from the optical ring, each traffic stream comprising at least one channel; and the plurality of nodes comprising a combination node (Figure 23), the combination node comprising: a coupler node transport element (reference numeral 120 in Figure 23) operable to drop and continue optical traffic passing through the coupler node transport element; and a hub node transport element (i.e. “Circulator” and reference numeral 166 in Figure 23) cascaded with the coupler node transport element, the hub node transport element operable to selectively pass (i.e. all wavelengths not

Art Unit: 2613

reflected by the tunable filter) or terminate (i.e. via reference numeral 166 in Figure 23) a plurality of individual sub-bands of the optical traffic.

Regarding claims 35 and 41, Way teaches an optical ring (i.e. "Ring" in Figure 19) operable to communicate optical traffic; a plurality of nodes (i.e. a node for each of the three rings) coupled to the optical ring, each node operable to passively add and drop one or more traffic streams to and from the optical ring, each traffic stream comprising at least one channel; the plurality of nodes comprising: a plurality of hub nodes (i.e. a hub node for each of the three rings) operable to selectively pass or terminate a plurality of individual sub-bands of the optical traffic; and a plurality of sub-band nodes (reference numeral 26 in Figure 6) each operable to terminate a respective sub-band of the optical traffic; wherein the plurality of hub nodes form a plurality of photonic domains (i.e. each ring) each operable to communicate different traffic streams in the same sub-bands without interference (paragraph [0071]).

Regarding claims 36-37 and 42-43, Way teaches that the plurality of hub nodes comprises two and three photonic domains (Figure 19).

Regarding claims 39 and 45, Way teaches that the plurality of switches are reconfigurable to provide optical shared path protection in the event of an error in the network (paragraph [0070]).

Regarding claims 40 and 46, Way teaches that the error comprises a fiber cut (as noted by "X" in the Figures).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2613

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 11, 15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Way in view of Johnson (U.S. Patent No. 6,868,201).

Regarding claim 4, 11, 15, 19, Way differs from the claimed invention in that Way fails to specifically teach that the demultiplexer and the multiplexer comprise array waveguides. However, Johnson teaches that the demultiplexers and multiplexers comprising array waveguides are well known in the art (column 8 lines 6-16). One skilled in the art would have been motivated to employ demultiplexers and multiplexers comprising array waveguides in the hub node of Way so that different band can be multiplexed and demultiplexed by the same device (column 8 lines 13-16 of Johnson). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include demultiplexers and multiplexers comprising array waveguides in the hub node of Way.

Response to Arguments

5. Applicant's arguments filed 8/17/07 have been fully considered but they are not persuasive. The applicant argues that Way fails to specifically teach the limitations of the claimed invention since nodes 26 of Way merely pass and drop traffic to components at the node, therefore failing to terminate a respective subband of optical traffic as claimed. However, the examiner disagrees. Each node 26 in Figure 6 terminates traffic by first coupling the opt

Art Unit: 2613

signal from the ring to associated optical receivers where the optical signals are received and thereby terminated.

Similarly, the applicant argues that the cited hub node transport element fails to selectively pass or terminate from continuing on the ring a plurality of individual subbands. However, as noted in the office action, the hub transport element is clearly indicated as the combination of reference numeral 166 and the circulator in Figure 23. These two elements, when taken together, function to selectively pass (e.g. all wavelengths except wavelength 1) or terminate (e.g. wavelength 1 being received and thereby terminated by element 166 in Figure 23) a plurality of individual subbands. Furthermore, even if applicant is not convinced that element 166 in Figure 23 terminates optical signals, the examiner notes that this limitation is optional in that the applicant refers to it in the alternative.

Finally, the applicant argues that Way fails to specifically teach a plurality of hub nodes on the same ring forming a plurality of photonic domains on the ring each operable to communicate different traffic streams in the same sub-bands without interference. However, as noted in the office action and shown in Figure 13, the examiner has considered each ring (e.g. the left-hand, the right-hand, and the bottom ring) as a separate optical domain with the plurality of elements that connect them interpreted as hub nodes. Furthermore, while the applicant contends that the plurality of nodes are on the same ring, the claim language fails to reflect this limitation.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2613

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/695,711

Page 8

Art Unit: 2613

A handwritten signature in black ink, appearing to read 'A. Bello'. The signature is fluid and cursive, with a large initial 'A' and 'B'.

Agustin Bello
Primary Examiner
Art Unit 2613

AB